Mr. Michael T. Davis Pre-Calculus	1.4 Quadratic Polynomials - Factoring & Solving In-Class (1) September 7-8, 2016

Name: Solutions

1. Multiply $5(x-4)$ $= 5x-20$

2. Multiply $5x(x-4)$ $= 5x^2-20x$

3. Multiply $(x+2)(x+5)$ $= x^2+7x+10$

4. Multiply $(x-2)(x+5)$ $= x^2+5x-2x-10 = x^2+3x-10$

5. Multiply $(x+5)(x+5)$ $= x^2+5x+5x+25 = x^2+10x+25$

6. Multiply $(2x+5)(x+3)$ $= 2x^2+6x+5x+15 = 2x^2+11x+15$

7. Multiply $(2x-5)(4x+3)$ $= 8x^2+6x-20x+-15 = 8x^2-14x-15$

8. Factor $5x-20$ $= 5(x-4)$

9. Factor $5x^2-20x$ $= 5x(x-4)$

10. Factor $x^2+7x+10$ $= (x+2)(x+5)$

11. Factor $x^2+3x-10$ $= (x+5)(x-2)$

12. Factor $x^2+10x+25$ $= (x+5)^2$

13. Factor $2x^2+11x+15$ $= (2x+5)(x+3)$

14. Factor $8x^2-14x-15$ $= (2x-5)(4x+3)$

15. Solve $5(x-4)=0$ $\{4\}$

16. Solve $5x(x-4)=0$ $\{0,4\}$

17. Solve $(x-2)(x-5)=0$ $\{2,5\}$

18. Solve $(x+2)(x-5)=0$ $\{-2,5\}$

19. Solve $(x+5)(x-5)=0$ $\{-5,5\}$

20. Solve $(2x+5)(4x+3)=0$ $\left\{-\frac{5}{2}, -\frac{3}{4}\right\}$

21. Solve $(2x+5)(4x-3)=0$ $\left\{-\frac{5}{2}, \frac{3}{4}\right\}$

22. Solve $x^2-4x=0$ $x(x-4)=0$ $\{0,4\}$

23. Solve $5x^3+10x^2-20x=0$ $5x(x^2+2x-4)=0$ DNF

$5x=0$

$\{0\}$

24. Solve $x^2-7x+10=0$ $(x-5)(x-2)=0$ $\{5,2\}$

25. Solve $x^2+10x+25=0$ $(x+5)^2=0$ $\{-5\}$

26. Solve $2x^2+11x+15=0$ $(2x+5)(x+3)=0$ $\left\{-\frac{5}{2}, -3\right\}$

27. Solve $8x^2-14x-15=0$ $(2x-5)(4x+3)=0$ $\left\{\frac{5}{2}, -\frac{3}{4}\right\}$